

Changes in the Pharmacy Curriculum as a Result of 3+3+4

Susan S. S. Ho

Associate Director

(Pharmacy Education)



Outline

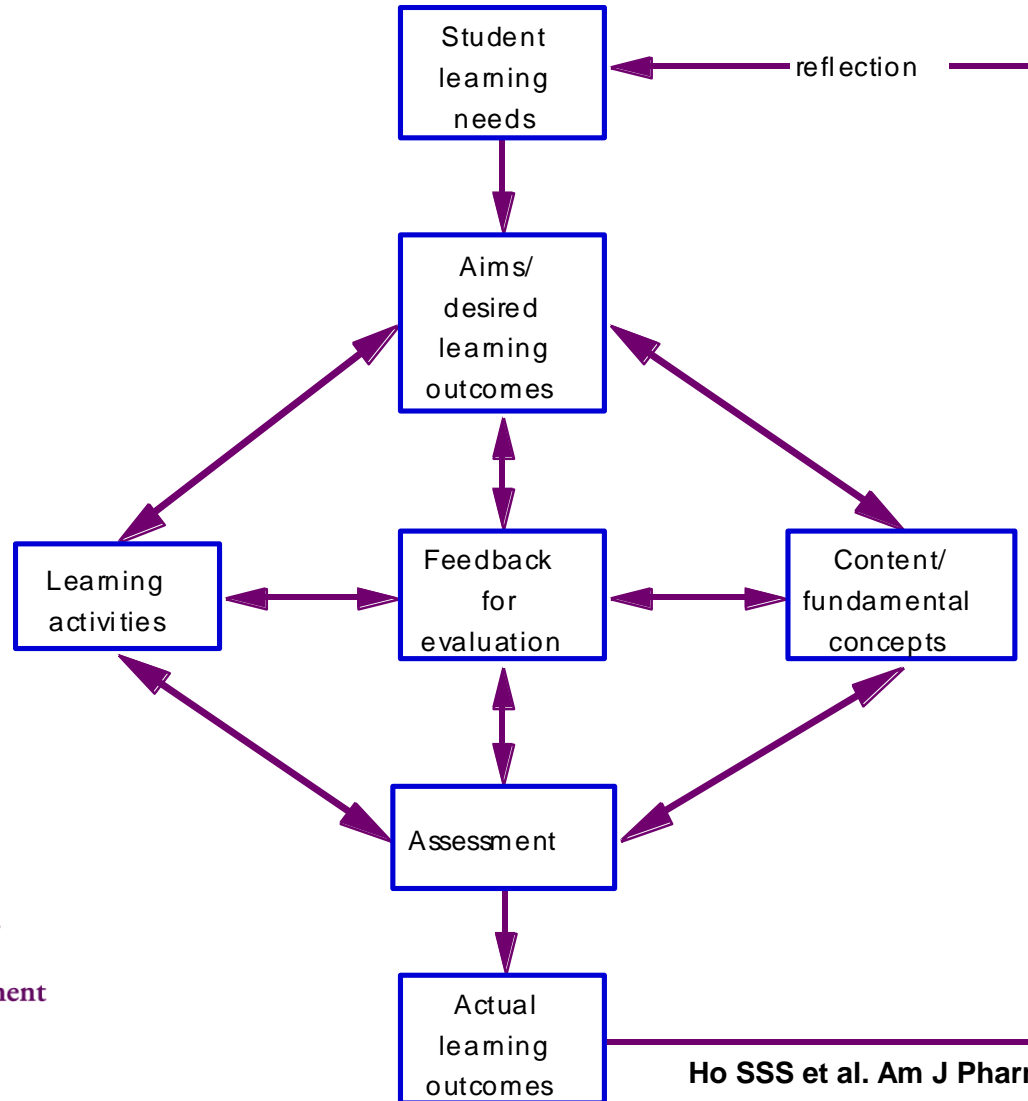
- **Curriculum Changes**
- **Admissions Issues**
- **Resource Implications**

3+3+4 academic reform

- Outcomes-based approach (OBA)
- Whole person education
 - Major courses (BPharm)
 - General education
 - Languages (English and Chinese)
 - Physical education
 - Information technology
 - Other electives (e.g. minor degree)



OBA Curriculum Planning Model



Outcomes Statement for 2012

The Pharmacy Programme aims at preparing graduates to become integral members of the health-care team with primary responsibility in managing the safe and cost-effective use of medications and other therapies for the treatment and prevention of disease.

Programme Learning Outcomes in 2001 Curriculum Revision

Professional Knowledge / Skills

- Professional knowledge
- Professional attitude
- Work manner
- Use of information
- Counseling skills

Generic Competencies

- Critical thinking
- Creative thinking
- Self-managed learning
- Adaptability
- Problem solving
- General communication skills
- Interpersonal skills and groupwork



Upon the completion of the 4-year Pharmacy programme, the graduate is:

**Professional knowledge
and application (K/S)**

- prepared with scientific and professional knowledge and skills for contemporary pharmaceutical practice
- able to collect and interpret scientific and clinical data
- able to adopt a systematic approach in analyzing and solving problems in the manufacture and quality assurance of pharmaceutical products

**Professional attitude
and conduct (S/V)**

- able to accept responsibility for his/her own actions and decisions
- able to apply relevant ethical and legal principles in the practice of pharmacy
- able to uphold the professional code of conduct

**Professional
communication (S)**

- able to communicate effectively with patients, peers, other health professionals and the public
- confident and competent in counselling patients and clients on prescription, non-prescription and consumer health products

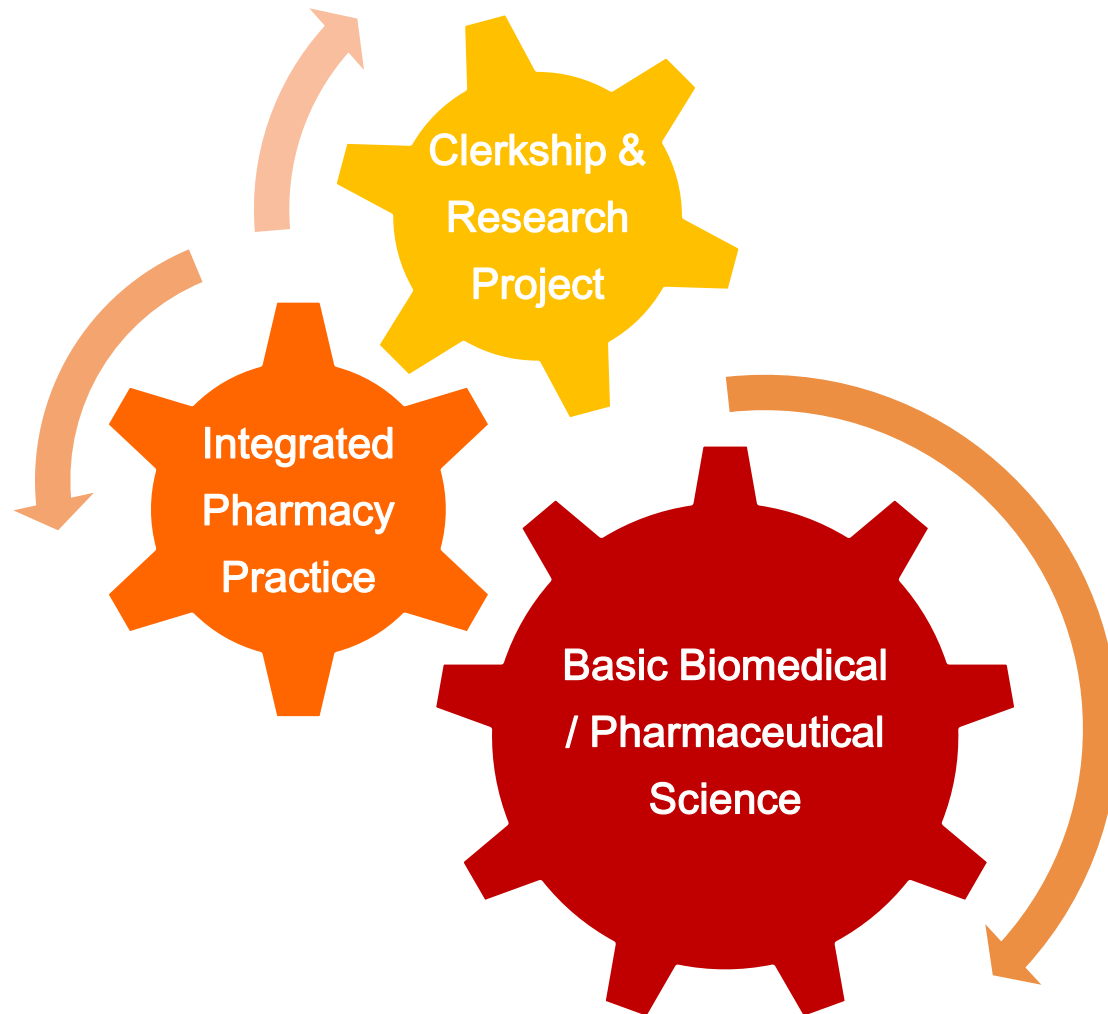
**Information evaluation
and decision-making
(K/S)**

- able to retrieve and critically evaluate medical/pharmaceutical literature
- able to identify and appropriately utilize drug information resources to assist with patient-specific drug therapy monitoring
- confident in making decisions on patients' drug therapy and recommending appropriate treatment

**Continuing education
and lifelong learning
(K/S/V)**

- able to build upon his/her knowledge and skills and engage in lifelong continuing education and professional development

3-year Programme Structure



Main Features of the 4-year BPharm at CUHK



- A **faculty core** to promote inter-professional education
 - Foundation Course for Health Sciences I & II
 - Public Health & Health-care Ethics
 - Communication Skills
- Introduce **new elective courses**
- Expand the **practice-based** pharmacy clerkships → longer duration, more choices
- Retain the **research option** in the final year
- Emphasis on personal/professional development and **lifelong learning** in pharmacy

Knowledge and Skills Clusters

Y4 Pharmacy clerkship/research project (Capstone)

Y1,2,3,4 Integrated pharmacy practice courses

Y1,2,3,4 Pharmaceutical sciences courses

Y1,2 Biomedical science courses

Y1 Faculty foundation courses

Pharmacy Programme Framework

Year 1	Year 2	Year 3	Year 4
	Integrated Pharmacy Practice		
Integrated Pharmacy Practice		Integrated Pharmacy Practice	Personal Development in Pharmacy
Pharmaceutical Sciences	Pharmaceutical Sciences		Pharmacy Clerkship / Research Project
Biomedical Sciences			
Faculty Foundation Courses	Biomedical Sciences	Pharmaceutical Sciences	Integrated Pharmacy Practice
			Pharmaceutical Sciences

Pharmacy Course Structure

Year 1	Year 2	Year 3	Year 4		Electives
	Principles of Pharmaceutical Dispensing	Clinical Assessment & Monitoring			
	Pharmacology & Therapeutics I	Contemporary Pharmacy Practice	Personal Development in Pharmacy		
		Pharmacy Law	Clinical Pharmacy Clerkship : Internal Medicine	Research Project I	Community Pharmacy Practical Training
			Pharmacology & Therapeutics II	Community Pharmacy Clerkship	Research Project II
Other elective clerkship	Hospital Pharmacy Practical Training				
Introduction to Pharmacy	Dosage Form Science I				Combined Pharmacy Clerkship
Fundamentals of Pharmaceutical Chemistry	Dosage Form Science II				
Clinical Microbiology & Infection Control	Fundamentals of Herbal Medicines	Pharmacology & Therapeutics III	Complementary & Alternative Medicine		Drug Safety and Pharmacovigilance
Communication Skills	Pharmaceutical Analysis	Biopharmaceutics & Pharmacokinetics	Community Pharmacy Practice		Healthcare System Management
	Anatomy & Physiology I	Medicinal Chemistry & Drug Design			Principles of Management & Pharmaceutical Marketing
Public Health & Healthcare Ethics	Anatomy & Physiology II		Pharmacology & Therapeutics IV	Pharmaceutical Research Methods	
Foundation course for Health Sciences I	Biochemistry & Molecular Biology	Pharmaceutical Product Development & Manufacturing		Pharmacogenomics & Pharmaceutical Biotechnology	Drug Product Design & Innovation

Expanded eLearning



Case-based Learning Module for Pharmacy Students: Diabete Mellitus case 1 - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://137.189.161.34/moodle/mod/quiz/attempt.php

Google edmedia 2008 - Googl... kavali.pdf (applicatio... eLearning @ CUHK Case-based Learning Module for ...

Preview Diabete Mellitus case 1

Start again

1 Marks: 0/1

Instruction: You may answer all the questions first and submit answers all at once or do each question individually

Patient developed flu-like symptoms on 8/2 with productive cough but no fever. He was found unarousable at home in Zhongshan on 10/2 and was sent to a local hospital, vital sign is poor at that time wiht no measurable blood pressure. Patient regained consciousness after resuscitation and was diagnosed with uremic encephalopathy. The patient denied hunger nor sweating before collapseing. He then treated by hemodialysis on 10/2 and 12/2 and was referred back to HK for further management.

Based on above information,which of the following condition is the most likely casue of the loss of conciousness?

Choose one answer.

- ☐ a. Chest infection
- ☐ b. Hypokalemia
- ☒ c. Hyperglycemia
- ☐ d. Hypoglycemia
- ☐ e. Hyperkalemia

Incorrect

Submit

Incorrect
Marks for this submission: 0/1. You were not penalized for this submission.

Potassium retention is always a problem with chronic renal failure and acute infection could precipitate acute-on-chornic renal failure which worsen the problem further. A sudden increase in potasssium level may cause ventricular arrhythmia and causing cardiac arrest. The patient diagnosed wiht uremic encephalopathy indicated that his renal function was very poor with retention of toxin causing CNS symptoms.

2 Marks: --/1

The physical examination findings in this patient was as follow:

VS: BP: 167/80 Pulse: 90/min Temp: 37.3°C SaO2: 98% on 2L/min O2

Done

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Overseas
Exchange



Core
BPharm
Curriculum



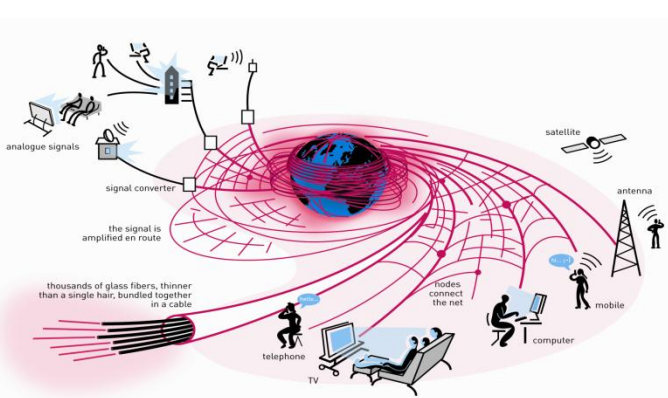
Summer
Practical
Training



Community
Outreach



Personal & Professional Development in Pharmacy



Identify learning needs and make plans

Reflect on achievement of learning outcomes & identify own strengths / weaknesses

Develop a professional profile for future employment and/or postgraduate studies

Demonstrate capability in pursuing lifelong learning and continuing education in pharmacy

Admissions Issues

Admissions 2012

- Double Cohort (3 yr and 4 yr)
- ↑ student quota from 30 to 55 per class
- Admissions quota from 30 → **110** students
- Final intake of **112** students!!!

Major Schemes for Admission

- **JUPAS**
 - Hong Kong Diploma of Secondary Education Examinations (HKDSE)
- **Local Non-JUPAS**
 - Degree Holders
 - Local Universities
 - Overseas Universities
 - Undergraduate Students
 - CUHK: By Transfer
 - Other Universities
 - High School Graduates
 - e.g. IB, GCE AL, IGCSE

**** All admission schemes require interview ****

New Curriculum 2012 Intake

- **JUPAS:** 56 students
 - Main round: 53
 - Other experiences and achievements (OEA): 1
 - Appeal cases: 2
- **Local Non-JUPAS:** 2 students
 - Degree Holder: 1
 - IGCSE: 1

JUPAS Admission Rankings

- 4-year Programme
 - Top 2nd in University ranking
- 3-year Programme
 - Top 4th in University ranking
 - 4th in 2011
 - 2nd in 2010
 - 3rd in 2009

Challenges for Admission

- JUPAS applicants
 - The band-A applicant number is more than double
 - HKDSE cohort is 130+ vs. AL cohort is 60+
 - High manpower demand to conduct interviews
- Non-JUPAS applicants with higher qualification than 6th formers
 - 4-year program less attractive?
 - Advance standing?

Opportunities

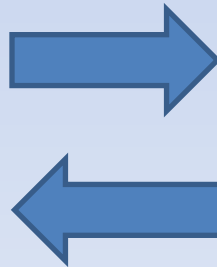
- Any differences between 3-yr and 4-yr cohorts taking same Y1 courses?
 - Introduction to Pharmacy
 - Fundamentals of Pharmaceutical Chemistry
 - Clinical Microbiology and Infection Control

Resource Implications

- Faculty package → big classes
 - effective in teaching communication skills?
 - financial arrangements on the teaching?
- Increase in student intake quota → ↑ by 25 (class size 55) → No increase in head count
- Laboratory sessions → resource intense
 - medicinal chemistry, pharmacy practice (dispensing techniques), pharmaceutical analysis, pharmaceuticals, and herbal medicines...etc.
- Clerkships → challenge to recruit adjunct tutors

Additional Challenges

- Separation of teaching and research → ↓ efficiency
- Relationship with students → compromised?



<http://www.pharmacy.cuhk.edu.hk>

<http://www.cuhk.edu.hk/334>

Thank you !

